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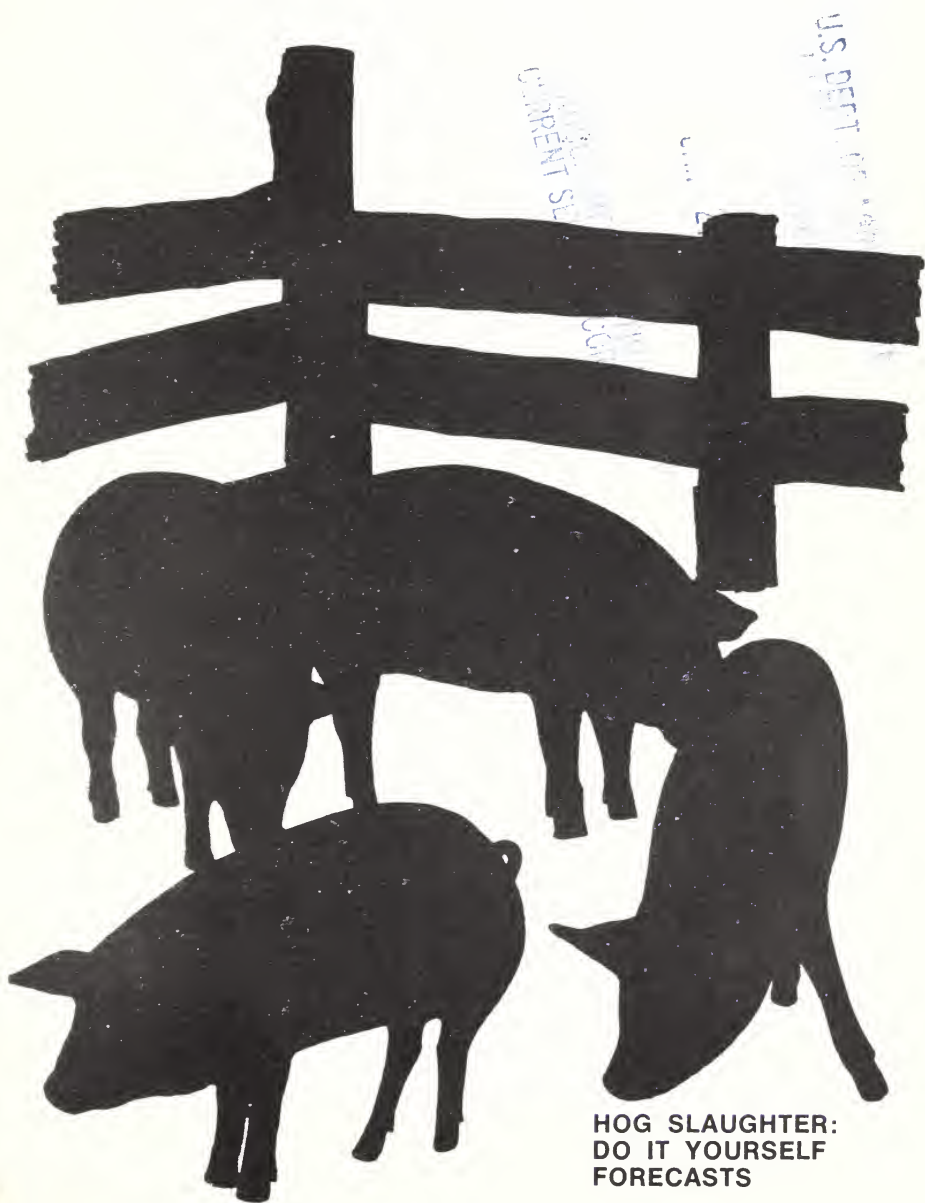
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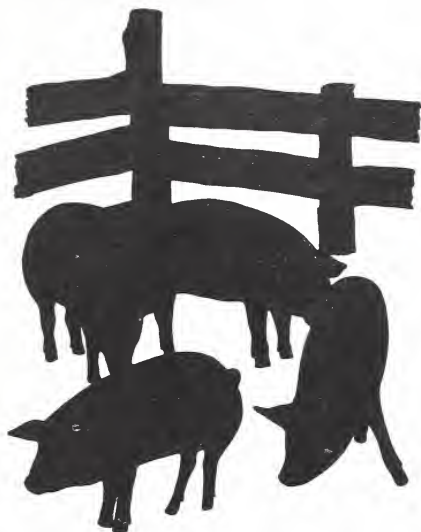
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U.S. DEPARTMENT OF AGRICULTURE • STATISTICAL REPORTING SERVICE



HOG SLAUGHTER:
DO IT YOURSELF
FORECASTS

HOG SLAUGHTER: DO IT YOURSELF FORECASTS



Starting with SRS' Hogs and Pigs report, any hog producer in the Nation can make his own projection of hog slaughter in the coming months.

Will Walther, chief of SRS' Livestock, Dairy, and Poultry Branch, and Gerald Clampet, principal hog commodity statistician, recently detailed how professional forecasters translate SRS' hog inventory and pig crop data into market supplies for the near future.

With the help of a couple of charts, we'll show you how to take the June Hogs and Pigs report and use it to gauge potential market supplies during June-August and September-November.

Your Data Base

SRS's quarterly Hogs and Pigs report will give you much of the data you need for making slaughter forecasts up to 6 months hence: an inventory of breeding and market animals in the major hog producing States *and*, critically important, a breakdown of the market hog group by weight classes.

These quarterly reports are the major data sources for forecasters in both government and industry who project the future level of hog supplies.

Charting Prospective Slaughter

One of the approaches to forecasting future hog slaughter involves selected data in the Hogs and Pigs report and some plotting on the charts shown on page 4.

These charts show the past relationships between the number of hogs in two different weight groups as of June 1 in the Nation and the level of commercial hog slaughter in June-August and September-November.

Hogs gain about 1 to 1½ pounds a day from birth to slaughter. The common slaughter market weight for hogs is somewhat over 220

pounds—which means that June-August supplies will rest mainly on the number of hogs weighing 120 or more pounds as of June 1. September-November marketings will come mainly from the 120-pound or under group.

(The table on page 3 gives the approximate marketings schedule for the various weight groups throughout the year.)

To forecast marketings for the June-August quarter, add up the number of market hogs in the 120-pound-plus weight group as of June 1 in the United States. The data will be in the June Hogs and Pigs report.

Next, pinpoint this total on the horizontal grid at the bottom of the June-August marketings chart (top page 4). From there, measure the distance to the diagonal line to read off the probable level of the June-August commercial slaughter.

Here's an illustration:

Suppose on June 1 there were 9 million hogs in the 120 to 179 pound weight group; 5 million in the 180 to 219 pound group; and 1 million in the 220 pound-plus group.

Your combined total would be 15

million head, which you would pinpoint on the horizontal line indicating the number of June 1 market hogs weighing 120 pounds or more.

From that point draw a straight line up to the diagonal and read off the forecasted level of June-August marketings. You should get between 20.6 and 21.0 million head.

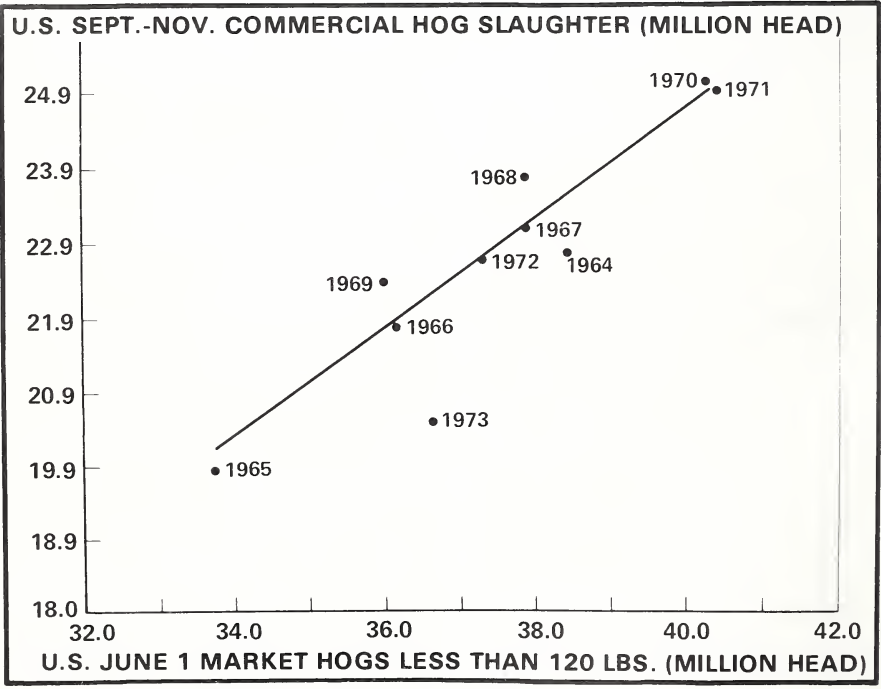
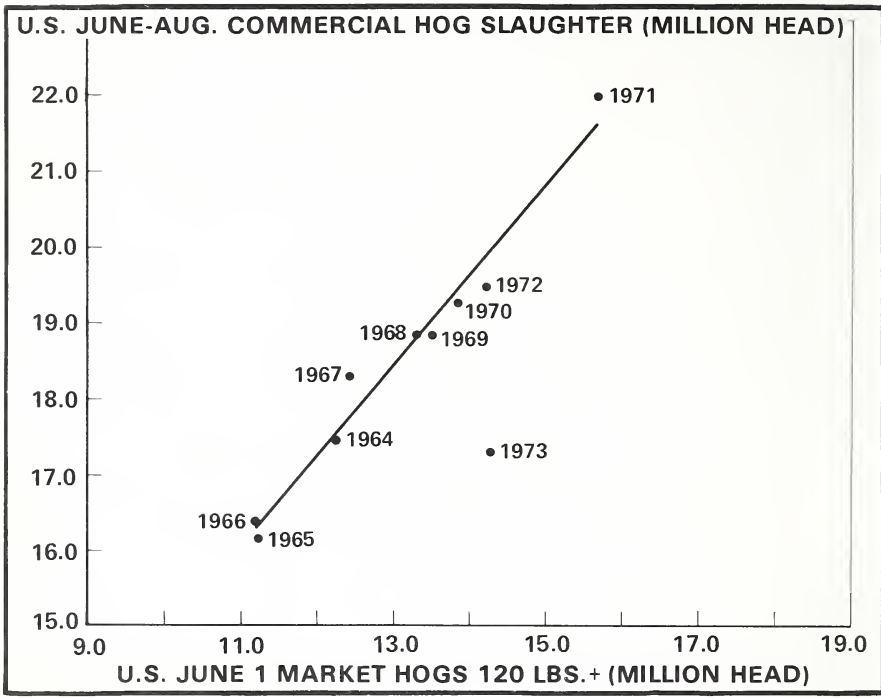
You can forecast September-November slaughter in exactly the same way—except that the weight classes to be totaled here are the under 60 pound and the 60 to 119 pound weight groups. Also, do your plotting on the chart at the bottom of page 4, which relates to September-November supplies.

In March and September, the Hogs and Pigs report covers only the 14 major hog producing States. Therefore, some upward adjustment in the inventory numbers to a probable total for all 50 States needs to be made. These 14 States had 86 percent of the U.S. total on December 1, 1973.

Adjust for Judgment Factors

You can see that the charts on page 4 also include numbers and

June 1 Weights	
Under 60 pounds	Mid-October through November
60 to 119 pounds	September through mid-October
120 to 179 pounds	Mid-July through August
180 to 219 pounds	Mid-June through mid-July
220 pounds and over	June 1 through mid-June
December 1 Weights	
Under 60 pounds	Mid-April through May
60 to 119 pounds	March through mid-April
120 to 179 pounds	Mid-January through February
180 to 219 pounds	Mid-December through mid-January
220 pounds and over	First week of December



dots above and below the diagonal.

These dots indicate the years and actual marketings in the June-August and September-November quarters during the past decade while the diagonal line indicates the average for 1964-72. The distance the dots are from the lines show how wide the annual deviations were from the 9-year average.

There's usually a logical explanation for each variation—or more likely several explanations.

A case in point was last year when a host of unprecedented conditions greatly distorted traditional marketing patterns.

Weight gains during 1973 were much slower than usual—resulting from adverse weather during the winter and spring, reduced feeding of proteins, and feeding of some poor quality corn from the 1972 crop. The slower gains lengthened the time hogs took to reach market weights.

On top of this delay, producer, packer buyer, and consumer reactions to price freezes were additional disruptive factors in the marketing system. Some producers fed animals to heavier weights, thus slowing the movement of animals through the production and marketing system.

Quite obviously, judgment plays a part in forecasting future marketings—and when plotting your charts you may want to adjust your forecast up or down depending on what you think production or market prices portend.

High prices usually encourage producers to market at lighter weights, indicating the number slaughtered might be greater than usual.

Conversely, during a period of declining prices, producers tend to hold hogs a little longer in hopes prices will get a little better.

The upshot is usually an increase in average hog weights and perhaps fewer than normal slaughtered in a particular quarter.

But keep in mind, hogs delayed in one period must eventually come up

for sale. In order to keep tabs on this movement, a close look at the inventory by weight groups is necessary each quarter. By comparing current numbers to previous years and previous quarters, some conclusions might be drawn as to how the "pork assembly line" is moving.

Intentions—And How to Handle Them

Each Hogs and Pigs report includes a paragraph on what producers say they plan in the way of sow farrowings in the coming quarter. If these intentions materialize, they are generally a pretty good indicator of supplies for 6 to 12 months later.

Always remember, though, the intentions report reflects industry conditions at one point in time. Should these conditions change, producers might alter their production plans dramatically.

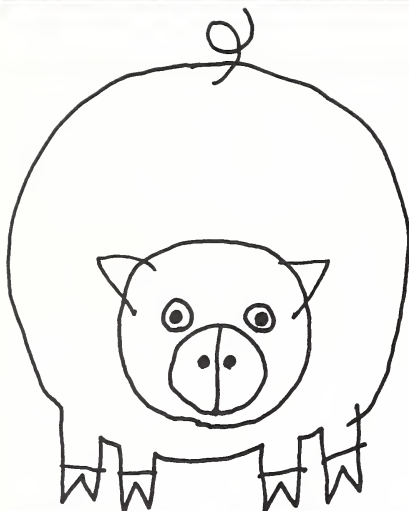
How Forecasting Can Work For You

The relatively simple charting described in this article can help a farmer get a perspective on the hog supply situation in the coming months. And this may help you time your own marketings to get the very best possible price advantage.

For instance, if you foresee a big boost in marketings in the near future and you've got hogs nearing market weight, you might want to move them to market before the crowd gets there and prices sag.

And it's a sure thing that the better your knowledge of the overall hog supply situation, the better your marketing position is going to be.

(Readers may obtain full-size charts for plotting prospective marketings by sending a postcard with their name, address, and zipcode to: Editor, Agricultural Situation, SRS-INF, U.S. Department of Agriculture, Washington, D.C. 20250.



WASTES AND CONSEQUENCES

Large-scale enterprises are still the rarity, rather than the rule, in hog production—which is why the Environmental Protection Agency's (EPA) recently enacted runoff control guidelines for farms with 2,500-plus hogs aren't expected to have serious industry-wide repercussions.

USDA economists who have assessed the impact of the EPA guidelines estimate that less than 1 percent of all hog producers are sufficiently large to be subject to the regulations—and though precise information is not available, it is estimated of these large producers only about 40 percent have waste control problems warranting the installation of new diversion and retention facilities.

For these operators, compliance with the guidelines would involve an average one-time investment of a little more than \$4 per head and an annual operating cost of 26 cents per 100 pounds of hogs sold, according to the economists' calculations.

Although some individual producers might be pinched by this

added financial burden, the economists felt the present regulations would not significantly affect the hog industry.

It would be an altogether different case were these guidelines ever to be expanded to include *all* hog producers, regardless of size.

EPA has considered such a step—and while it is not known whether such guidelines will actually be issued—USDA economists explored the possible impact.

Pinpointing the Problem. One in five hog producers has a problem controlling surface water runoff—and the larger the hog enterprise, the more apt it is to have difficulties.

The economists estimated that 40 percent of the farms selling 1,000 or more head a year needed to take some remedial action to prevent wastes from running off into surface water. This compared with fewer than a sixth of the producers in the 1-99 head sales class.

However, a crucial point to remember is, that though the percentage of small-scale producers with problems is slight, their absolute number is not. Indeed, they add up to 66,000 operations, or 60 percent of all the hog farms with problems.

The Costs of Control. Confining runoff on problem farms was estimated to require \$254 million for investment in new facilities. Annual costs for depreciation and interest, and operating costs for labor and equipment amount to \$36 million.

Of the investment costs, nearly 80 percent would be required in the Corn Belt-Lake States—which produce two-thirds of the Nation's hogs.

The Plains States would require about \$25 million and the Southeast States \$31 million to control runoff from exposed production areas. Although more hogs were marketed in the Plains States, the higher cost

in the Southeast is attributed to the humid climate.

On a size basis, about a third of the \$254 million investment total would fall on the very small operators (those with sales under 100 head). Four-fifths of the additional investment was on the operators selling between 100 and 500 head.

Investment costs for the very small producers ran as high as \$61 per hog while annual costs were \$4.24 per 100 pounds of pork sold.

Total Impact. The current trend in the hog industry is toward larger operations and total confinement. The adoption of waste control guidelines for all hog producers would undoubtedly accentuate this trend.

About 60 percent of the problem farms are small-scale operations with high unit costs. Many are marginal producers—and a stiff added cost for pollution controls would force many out of business.

Industry-wide regulations for controlling runoff thus have the potential of altering the present structure of production and reinforcing the longer term trend toward large-scale operations.

But their impact might well be felt beyond the hog industry, too.

The exodus of many small producers from hog production would have a direct effect on pork supplies. In a short span of time, the extra breeding hogs going to market as their owners phased out production would provide an increase in pork output for several months.

After that, though, the supply of pork could be expected to drop off and it could remain low for a few years.

Pinched, too, would be the many agribusiness firms that have traditionally supplied the small-scale hog producers. Included are feed dealers, equipment suppliers, veterinarians, and many other small town businesses that could be adversely affected by the adoption of stringent waste controls.

The short-term economic impact would be lessened, of course, were EPA to issue less stringent guidelines for small producers than are currently required for large producers, or if the timespan for compliance were lengthened from the present date of 1977.

WASTE CONTROLS: WHO THEY WOULD HIT

Item	Number of hogs sold each year					
	1-99	100-199	200-499	500-999	1,000+	All sizes
Farms with runoff problems (thousands)	33.7	17.5	25.8	7.6	1.7	86.3
Hog sales involved (million head)	1.3	2.4	7.8	5.0	2.8	19.3
Investment required to control surface runoff (\$ million)	82.9	48.1	81.8	29.7	11.2	253.7
Total annual cost for waste controls (\$ million)	12.1	6.9	10.8	4.5	1.5	35.8
Investment per head (\$)	60.95	19.65	10.60	6.14	4.19	13.16
Annual cost per 100 pounds of hogs sold (\$)	4.24	1.34	.67	.44	.26	.89



'LECTRONIC LETTUCE

Today's lettuce harvesting involves a large stoop labor force—a slow and costly way to fill the Nation's salad bowls. However, an experimental mechanical crisp-head lettuce harvester now under development by USDA may yield twin benefits: more standard-size lettuce and lower production costs.

While mechanical harvesters have been under study for years, successful mechanization awaited the development of a selector to accurately and consistently determine head maturity. USDA agricultural engineers apparently have found the key with an x-ray selector which gives each head what might be termed an electronic “squeeze”—and automatically cuts off those that are mature.

Under ideal conditions the mechanical harvester and a trained 15-man crew can harvest about 400 cartons of lettuce an hour. Picking by hand, the same 15 men could turn out only about 180 to 225 cartons.



This experimental lettuce harvester can more than double the output of a 15-man crew picking by hand—and researchers hope to further increase efficiency by quality inspecting and tumble packing into much larger containers right on the harvester.



Heart of the harvester is the small, medical-type x-ray unit shown here in operating position. X-rays transmitted through a mature head of lettuce trigger a mechanism that slices that head and starts it through the machine.



Held gently by an endless belt of hundreds of rubber fingers, lettuce heads move along toward a knurled disc that will trim off the bottoms, an operation formerly done by hand.



SURVEYSCOPE

To give our readers a clearer picture of the vast scope of SRS activities, Agricultural Situation presents a series of articles on special surveys undertaken in various States. While these are not national surveys, they are important to the agriculture in individual States.

Stretching away as far as the eye can see, Minnesota's sunflower crop is a dazzling sight to the casual beholder. But it's far more than that to Minnesota farmers. Indeed, it ranks as one of the State's fastest growing money crops—with earnings totaling about \$21.6 million in 1973, up 72 percent from 1972, which in turn was 46 percent higher than in 1971.

"Our sunflowerseed boom is part of the seemingly insatiable world demand for oilseeds in recent years," explains David Taylor, statistician in charge of the Crop and Livestock

Reporting Service in St. Paul.

"As recently as 1971, our acreage of sunflowers harvested for oil totaled 66,000, which was only about two-fifths of our 155,000-acre total. A year later, there was a complete turn-around in these proportions, with acreage harvested for oil up to 226,000, or about four-fifths of the total of 285,000. Since 1972 sunflowerseed acreage harvested for oil purposes has represented the lion's share of the yearly total."

Taylor's office keeps careful track of Minnesota's sunflowerseed acreage,



Burgeoning world demand for oilseeds has helped make sunflowerseed production . . .

production, and income through special grower and dealer surveys taken twice a year.

"Our first report of the growing season is timed to coincide with the July crop report," Taylor states. This year for the first time we will take a mail survey of growers regarding their planted acreage by oil and edible varieties."

"As in the past we will also mail questionnaires to people in firms contracting sunflower acres. We ask these dealers to furnish us with acreage under contract during the current year and acres contracted a year earlier."

At the end of the season, Taylor's office conducts another survey of planted and harvested acreage, as well as production and prices received by growers for oil and nonoil sunflower crops.

"We release this information in mid-January in a joint report with North Dakota and South Dakota," Taylor

takes pains to point out.

Funds for Minnesota's sunflower surveys are provided by State cooperators.

The latest sunflower report, issued on January 18 of this year, estimated last year's production at 288 million pounds, some 9 percent larger than in 1972.

The increase was due to higher yields—up 22 percent to 1,130 pounds an acre. (A late, wet fall during harvest contributed to a reduction in average yield in 1972.) Harvested acreage in 1973 showed an 11-percent dip from the year before.

For the 1973 season, Minnesota growers received an average of \$7.51 per hundredweight for contract and open market sales. The preliminary reported price of oil varieties was \$7.40 and for non-oil varieties, \$7.90. In 1972, the average price received per 100 pounds was \$4.75—with oil varieties going for about \$4.65 and non-oil varieties for \$5.20



... one of Minnesota's fastest growing money crops, worth \$21.6 million in 1973.

Briefings

RECENT REPORTS BY USDA OF ECONOMIC, MARKETING, AND RESEARCH DEVELOPMENTS AFFECTING FARMERS.

SOYBEAN SCENE . . . Soybean production in 1974 could total 1,540 million bushels, just under last year's record if acreage intentions and projected yields are realized. But adding this to the carryover expected on September 1 would boost 1974/75 supplies to 1.8 billion bushels, about a tenth above the current season and a new record.

USE BOOST . . . Total soybean utilization next season is projected to increase about 100 million bushels to 1.5 billion. Both crushings and exports are projected to gain about 50 million bushels each over the levels set for the current marketing year. Such gains would not quite keep pace with production and would result in an increase in carryover stocks on September 1, 1975, to nearly 300 million bushels. Prices received by farmers in 1974/75 probably will average considerably less than the average of \$5.65 per bushel expected for the current marketing year.

RECORD RICE PRICE . . . The lowest level of rice stocks in over 20 years, a delay in the 1973 harvest, uncertainty about world export supply, and strong demand set the stage for a rapid rise in rice prices during the first half of the 1973/74 marketing season. Farm prices advanced to over \$17 per cwt. (rough), wholesale prices moved up to about \$35 per cwt., and retail prices at major cities jumped to 50 cents a pound (long grain milled). Little decline from the current hot pace is likely for rice prices until harvest of the prospective record 1974 crop gets under way this summer.

THE COMING SEASON . . . If farmers carry through on their March planting intentions and yields per acre reach a level of around 4,700 pounds, the 1974 rice crop could total a record 111 million cwt. This would push projected supplies for 1974/75 to a new high of 116 million cwt. USDA economists also foresee a record demand of close to 100

million cwt. shaping up. Domestic food and brewer use is slated to keep on growing and U.S. exports could rise to a record large 61 million cwt. But stocks would still build, easing the tight situation experienced in the previous two seasons. This would also suggest lower average farm prices for 1974/75.

EXPORT OUTLOOK . . . U.S. farm exports in fiscal 1975 may fall slightly from the estimated 1974 level of over \$20 billion to between \$17 billion and \$19 billion. Some of the recent developments pointing to moderately lower sales are the high prices for crude oil, reduced foreign exchange, an anticipated increase in world food production—especially grain—and generally lower prices. The projected decrease will be based mostly on a somewhat lower export volume of feed grains and wheat, and lower prices for most grains and oilseeds.

THE ENERGY CRISIS AND TRADE . . . Higher crude oil prices will be a major influence upon 1974 world trade. The increased prices of crude petroleum that have recently gone into effect will force some countries to make significant economic adjustments, some in their trade account. However, USDA trade experts think countries which will have to reduce imports will probably cut back on nonfood items to a greater extent than food items. Another effect of the energy situation is an anticipated shortage of fertilizer, especially in the developing countries. Because of the reduced availability, many of these farmers may find it difficult to achieve the trend-level increase in grain yields.

KENAF POTENTIAL . . . Kenaf, a promising new source of raw material for paper pulp, could help solve the national shortage of timber used in paper manufacture. USDA researchers have just released a study describing how kenaf yields might be predicted by systematic evaluation of leaf development and stem heights—an important breakthrough in encouraging commercial kenaf production. It appears that more than 20 tons per acre of kenaf could be expected under good conditions in southern Florida and Texas. Between 10 to 12.5 tons per acre might be obtainable as far north as eastern North Carolina.

WHAT'S COMING IN COTTON . . . The outlook for the 1974/75 marketing year is highlighted by prospects for larger production—perhaps around 14 million bales—and a continued high level of disappearance. Despite much uncertainty surrounding the energy and transportation problems, combined mill use and exports may equal

1973/74's expected 13¼ million bales. While mill consumption may increase a little to about 7¾ million bales, reflecting some easing in manmade fiber consumption, U.S. cotton exports are projected at 5½ million, only slightly below current expectations. With 18% more acreage planned for the 1974 crop, production should be adequate for these needs. And depending on the level of output, there is a good possibility of some stock rebuilding next season from the 3.8 million-bale carryover expected this summer.

TEXTILE TALLY . . . A healthy gain in consumer income prompted greater sales of textile products in 1973, boosting domestic fiber consumption to a record high of nearly 13 billion pounds. This meant that U.S. consumers used the equivalent of 61½ pounds of fibers each, almost 3 pounds more than in 1972. However, per capita domestic cotton use declined slightly to 18½ pounds, partly as a result of tight cotton supplies.

TOMATO TOPS . . . Consumers serve tomatoes more often than almost any other vegetable, according to a recent USDA survey of consumers' preferences for 26 vegetables. Almost 3 out of 4 homemakers said they had served tomatoes at least twice a week in the year preceding the interview. What was so winning about tomatoes? Their taste, said the consumers, and the fact that they were easy to prepare and could be used in many different ways.

RUNNERSUP . . . Close to tomatoes but not quite in the same class, were lettuce, white potatoes, and white onions. More than half the homemakers said they served these vegetables twice a week or more. Following in popularity were green beans, corn, green peas, celery, cucumbers, carrots, cabbage, and green peppers—all of which were served by more than half the homemakers at least twice a month.

THE LOSERS . . . Fourteen vegetables were served infrequently (once a month or less by at least half of the homemakers) or not at all by the survey respondents. An unpopular taste was the main reason cited for the low use along with: difficulty in digesting (radishes); high cost (asparagus, cauliflower); get tired of (beets, black-eyed peas, broccoli, brussels sprouts, lima beans, spinach, squash, and turnips); not easy to prepare (eggplants); and high in calories (sweetpotatoes). No experience with the product was a relatively frequent response, next to dislike of taste, given for not serving black-eyed peas or okra.

Statistical Barometer

Item	1972	1973	1974—latest available data	
Prices:				
All prices received by farmers (1967=100)	126	172	194	March
Crops (1967=100)	115	164	218	March
Food grains (1967=100)	109	212	337	March
Feed grains and hay (1967=100)	105	162	225	March
Feed grains (1967=100)	101	161	229	March
Cotton (1967=100)	127	149	246	March
Tobacco (1967=100)	123	129	137	March
Oil crops (1967=100)	116	209	218	March
Fruit (1967=100)	115	131	139	March
Fresh market ¹ (1967=100)	122	138	138	March
Commercial vegetables (1967=100)	116	137	127	March
Fresh market (1967=100)	131	162	143	March
Potatoes, sweetpotatoes, and dry edible beans (1967=100)	121	208	393	March
Livestock and products (1967=100)	134	178	179	March
Meat animals (1967=100)	147	198	183	March
Dairy products (1967=100)	120	138	172	March
Poultry and eggs (1967=100)	103	175	173	March
Wool (1967=100)	90	204	182	March
Prices paid, interest, taxes, and farm wage rates (1967=100)	127	145	161	March
Prices paid by farmers	123	142	159	March
Family maintenance	124	138	156	March
Farm production	122	146	162	March
Interest	151	165	204	March
Taxes	152	161	164	March
Wage rates	142	155	161	March
Ratio ² (1967=100)	118	118	120	March
Consumer price index, all items (1967=100)	125	131	142	February
Food (1967=100)	141	153	158	February
Farm Income:				
Volume of farm marketings (1967=100)	112	110	---	---
Cash receipts from farm marketings (\$bil.)	60.7	83.4	---	---
Realized gross farm income (\$bil.)	68.9	90.5	---	---
Production expenses (\$bil.)	49.2	64.4	---	---
Realized net farm income (\$bil.)	19.7	26.1	---	---
Income and Spending:				
Disposable personal income, total (\$bil.)	797.0	882.6	---	---
Expenditures for food (\$bil.)	125.0	139.0	---	---
Share of income spent for food (percent)	15.7	15.8	---	---
Farm Food Market Basket: ³				
Retail cost (1967=100)	121	142	160	February
Farm value (1967=100)	124	164	189	February
Farmer's share of retail cost (percent)	40	45	54	February
Agricultural Trade:				
Agricultural exports (\$bil.)	9.4	17.7	3.7	Jan.-Feb.
Agricultural imports (\$bil.)	6.5	8.4	1.6	Jan.-Feb.

¹Fresh market for noncitrus and fresh market and processing for citrus

²Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates.

³Average quantities per family and single person households bought by wage and clerical workers, 1960-61, based on Bureau of Labor Statistics figures.

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GERALDINE SCHUMACHER, EDITOR

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